

We claim:

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1. An elastomeric laminate comprising at least one nonelastomeric skin layer and at least one at least partially elastomeric core layer, the laminate comprised of at least one preferential activation zone wherein said at least one core layer is substantially elastomeric and where said laminate is inelastic as formed and when stretched will preferentially elongate and can recover in said preferential activation ^{zone} ~~zone~~ to become elastic.

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2. The elastomeric laminate of claim 1 wherein said at least one preferential activation zone has relative modulus region over at least 20% of its extents on average in the direction transverse to the stretch direction.

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3. The elastomeric laminate of claim 2 wherein said at least one preferential activation zone has lower modulus region over at least 50% of its extents on average in the direction transverse to the stretch direction.

4. The elastomeric laminate of claim 3 wherein non-preferentially activated zones comprise a second zone having lower modulus regions at least 20% less over its extents on average, transverse to the stretch direction, compared to the comparable extents of said at least one preferential activation zone.

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5. The elastomeric laminate of claim 2 wherein said laminate when stretched will preferentially elongate the low modulus regions in said preferential activation zone past the inelastic deformation limit of at least one skin layer which layer will form a microtextured surface upon recovery of the laminate.

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6. The elastomeric laminate of claim 1 wherein the laminate in said preferential activation zone will recover from its stretched length by 15% or more after at least 1 second.

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7. The elastomeric laminate of claim 6 wherein the laminate will recover from its stretched length by 15% after at least 5 seconds.

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8. The elastomeric laminate of claim 7 wherein the laminate will recover from its stretched length by 15% after at least 20 seconds.

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9. The elastomeric laminate of claim 8 wherein the laminate will recover from its stretched length by less than 15% after 20 seconds and when then exposed to an activation temperature above 26.7°C will recover by at least 50% of the total recovery.

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10. The elastomeric laminate of claim 1 wherein the recovery is initiated mechanically.

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11. The elastomeric laminate of claim 1 wherein the laminate recovers by at least 15% after 1 second.

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12. The elastomeric laminate of claim 2 wherein non-preferentially activated zones contain a relatively high modulus region that has been subjected to an annealing process.

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13. The elastomeric laminate of claim 2 wherein said relatively low modulus regions have been subjected to a plasticization treatment.

14. The elastomeric laminate of claim 2 wherein non-preferentially activated zones contain at least one

relatively high modulus region that has been subjected to a crosslinking treatment.

15. The elastomeric laminate of claim 4 wherein, in at least one layer, a higher modulus polymer composition, than the polymer composition of said layer in at least one low modulus region, is used in said second zone.

16. The elastomeric laminate of claim 15 wherein said higher modulus polymer composition comprises higher modulus polymer than polymer in said lower modulus polymer composition.

17. The elastomeric laminate of claim 15 wherein said higher modulus polymer composition and said lower polymer composition are predominately comprised of substantially identical polymers, either or both of which further comprising a modulus modifying additive.

18. The elastomeric laminate of claim 15 wherein said high modulus polymer composition is a nonelastomer, and said low modulus polymer composition is an elastomeric composition in which at least one layer comprises a core layer.

19. The elastomeric laminate of claim 1 wherein at least one of said core layers is an inner layer and at least one skin layer is an outer layer.

20. The elastomeric laminate of claim 16 comprising at least two skin layers.

21. An elastic adhesive tape comprising the elastomeric laminate of claim 1 wherein an area outside at least one preferential activation zone further comprises an adhesive layer.

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22. The elastic adhesive tape of claim 21 wherein two relatively non-preferential activation zones are adjacent to either side of a preferential activation zone wherein adhesive layers on said non-preferential activation zone are on the same face of the laminate, which elastic tape is of a size suitable for use as an adhesive closure tab.

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23. The elastic tape of claim 22 comprising a diaper closure tab.

24. The elastic tape of claim 21 wherein said preferential activation zone further comprises a low adhesion backsize on at least one face thereof.

25. The elastomeric laminate of claim 1 wherein said at least one preferential activation zone is comprised of at least one preferential stress region.

26. The elastomeric laminate of claim 25 wherein said at least one preferential activation zone has preferential stress regions over at least 20% of the laminate extents, on average, in the direction transverse to the stretch direction.

27. The elastomeric laminate of claim 26 wherein at least one non-preferential activation zone comprise a second zone having preferential stress regions at least 20% less over its extents, on average, transverse to the stretch direction as compared to the corresponding extents of said at least one preferential activation zone.

28. The elastomeric laminate of claim 25 wherein said preferential stress region is formed by scoring, ablating, corona treating or removal of material from at least one layer of said region.

Int 34 → 29. An elastomeric laminate comprising at least one nonelastomeric skin layer and at least one partially elastomeric core layer, the laminate comprised of
5 preferential activation regions and non-preferential activation regions.

Int C8 → 30. The elastomeric laminate of claim 29 wherein said preferential activation regions define zones
10 of preferential activation on the laminate.

Int D5 → 31. The elastomeric laminate of claim 30 wherein at least some of said preferential and non-preferential activation regions form a pattern which
15 when stretched and recovered will activate substantially in said preferential stress regions to form a patterned surface macrotexture and at least one microstructured skin layer in said preferential activation region.

Int G10 → 32. The elastomeric laminate of claim 31 wherein both said preferential and non-preferential activation regions in said pattern stretch and are recovered.

25 33. The elastomeric laminate of claim 32 wherein both said preferential and non-preferential activation regions in said pattern form microstructured skin layer regions.

30 34. The elastomeric laminate of claim 25 wherein said at least one preferential stress region has been corona ablated.

35 35. The elastomeric laminate of claim 25 wherein said at least one preferential stress region has microcracks created by corona treatment.

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36. The elastomeric laminate of of claim 29 wherein said preferential activation regions have been corona ablated.

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37. The elastomer laminate of claim 29 wherein said preferential activation regions have microcracks formed by corona treatment.

10 38. A method of forming a zone activatable inelastic laminate comprising the steps of providing a multilayer laminate of elastomeric core and thermoplastic skin layers and treating said laminate at certain regions in one or more layers to provide preferential activation zones wherein said preferential activation zones will
15 preferentially elongate and recover to form an elastic zone.

20 39. The method of claim 38 wherein said laminate is treated to have regions with lower composite modulus values, than adjacent regions.

25 40. The method of claim 39 wherein said lower modulus regions are provided by annealing adjacent regions.

30 41. The method of claim 38 wherein said laminate is treated to have preferential stress regions.

35 42. The method of claim 41 wherein said preferential stress region is created by corona discharge treatment.

43. The method of claim 42 wherein said corona discharge treatment comprises treating regions of the laminate below the corona saturation point and generating microcracks in said region by uniform deformation of said laminate.

44. The method of claim 43 wherein said uniform deformation is provided by a sharp takeup angle of said laminate from a surface.

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45. The method of claim 42 wherein said corona treatment comprises exposing said laminate to above saturation discharge levels to ablate material from one or more layers of said laminate.

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del C12 → 46. An article having a laminate with elastic regions comprising an elastomeric laminate having elasticized preferential activation zones and nonelasticized non-preferential activation zones which laminate is comprised of at least one nonelastomeric skin layer and at least one at least partially elastomeric core layer.

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47. The article of claim 46 wherein said article is a garment further comprising an engagement surface to which the elastomeric laminate is attached.

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48. The article of claim 47 wherein said laminate is attached to said engagement surface at said nonelasticized zones.

49. The article of claim 47 comprising a diaper.

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50. The article of claim 49 wherein said laminate comprises a diaper closure tab comprising a central elasticized zone and two nonelasticized outer zones at least one of which is adhesive coated on at least one face thereof.

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51. The article of claim 49 wherein said laminate comprises an elastizing element at a leg or waist

engaging area and is attached to said engaging surface at said nonelasticized zones.

52. The article of claim 51 wherein said
5 elastic laminate is attached to said engaging surface with adhesive, which adhesive was applied as a hot melt thereby defining annealed nonelasticized zones.

53. The article of claim 46 wherein said
10 nonelasticized and elasticized zones extend continuously across substantially entire extents of said laminate.

54. The article of claim 46 comprising
15 nonelasticized and elasticized regions which form a pattern with single extents intersecting multiple elasticized and nonelasticized regions within a single overall activated elasticized zone.

55. The article of claim 46 wherein said
20 elasticized zones are comprised predominately of relatively low modulus regions and said nonelasticized zones are comprised predominately of relatively high modulus regions.

56. The article of claim 46 wherein said
25 elasticized zones are comprised predominately of regions treated to create preferential stress concentration.

57. The elastomeric laminate of claim 1 wherein
30 the activated zone width decreases by less than 20% when restretched to the extent of permanent deformation of at least one previously deformed skin layer.

58. The elastomeric laminate of claim 1 wherein
35 the surface area formed on the microtextured skin layer is at least 50% greater than an untextured surface.

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59. The elastomeric laminate of claim 1 wherein the laminate is a film formed of substantially coextensive layers having relatively constant average thicknesses across the width of the laminate.

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60. The elastomeric laminate of claim 1 wherein the core and skin layers remain in substantially continuous contact in the activated zones following stretching and recovery.

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61. The elastomeric laminate of claim 1 wherein the skin and core layers remain in substantially intermittent contact in the activated zones following stretching and activation.

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62. The laminate of claim 1 wherein the laminate is capable of recovering instantaneously, over time or upon the application of heat depending on the degree of stretch past the deformation limit of at least one skin layer in the activated zones.

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63. The elastomeric laminate of claim 1 wherein the at least partially elastomeric core comprises an A-B-A block copolymer.

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64. The elastomeric laminate of claim 63 wherein the ABA block copolymer comprises a styrene-isoprene-styrene, styrene-butadiene-styrene or styrene-ethylene butylene-styrene block copolymer.

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